

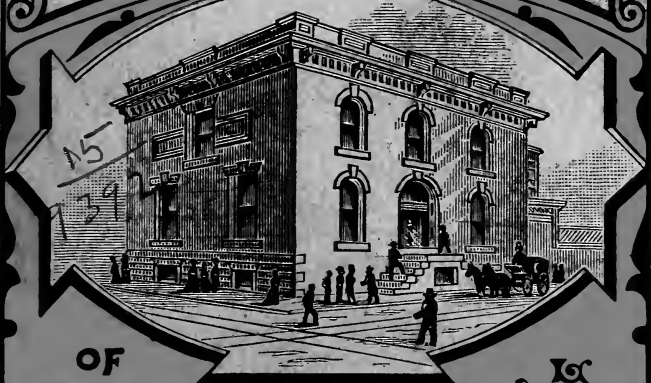
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ILLUSTRATED

PATENT OFFICES



OF
RUDOLPH M. HUNTER
CONSULTING ENGINEER

MECHANICAL EXPERT
AND
SOLICITOR OF AMERICAN & FOREIGN PATENTS

MAIN OFFICE

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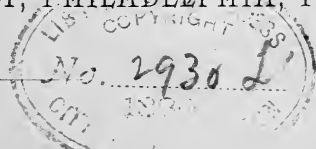
ILLUSTRATED
MANUAL FOR INVENTORS
ON
AMERICAN AND FOREIGN
PATENTS,

ETC.

✓
BY RUDOLPH M. HUNTER, M. E., C. E.
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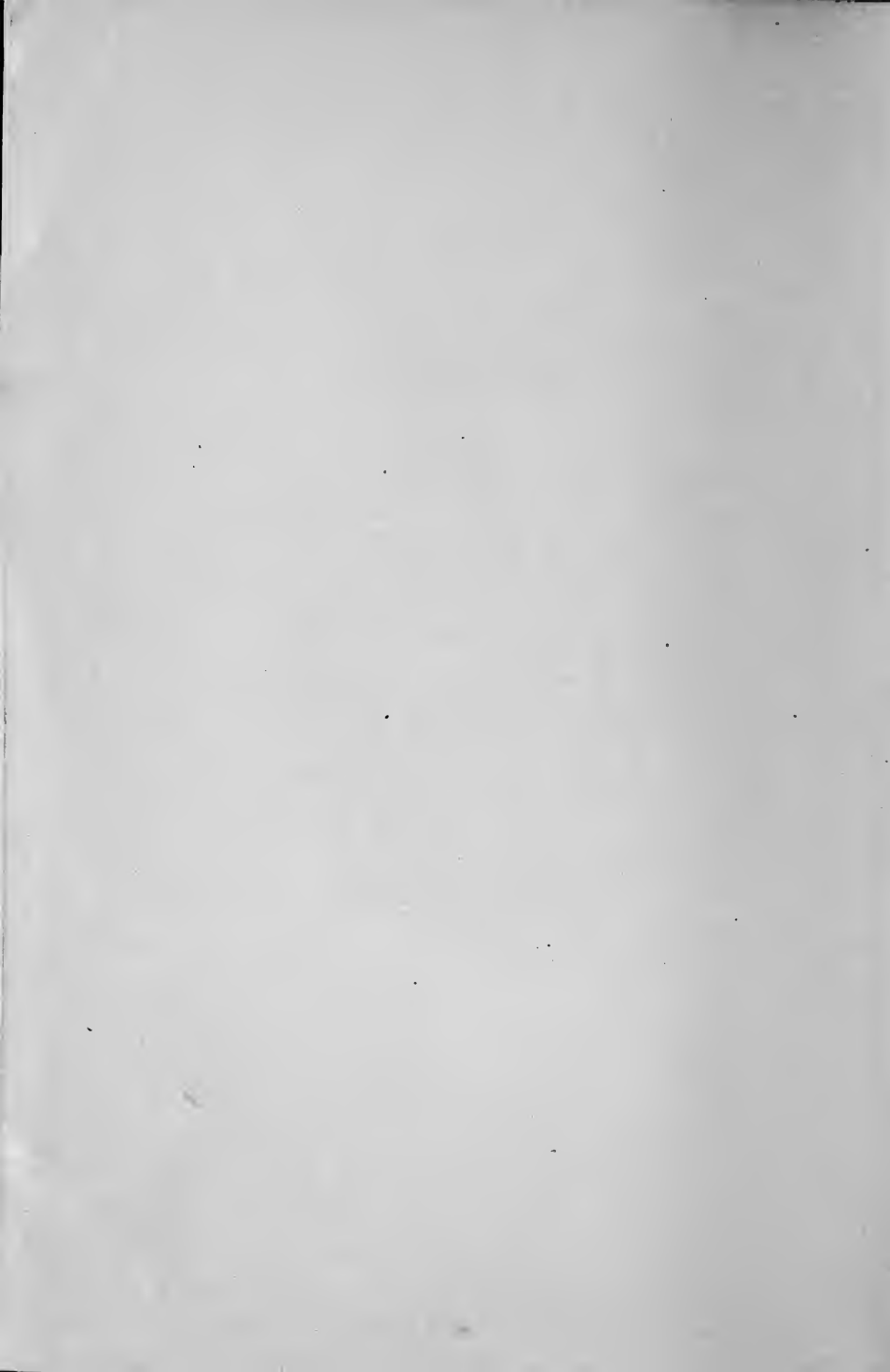
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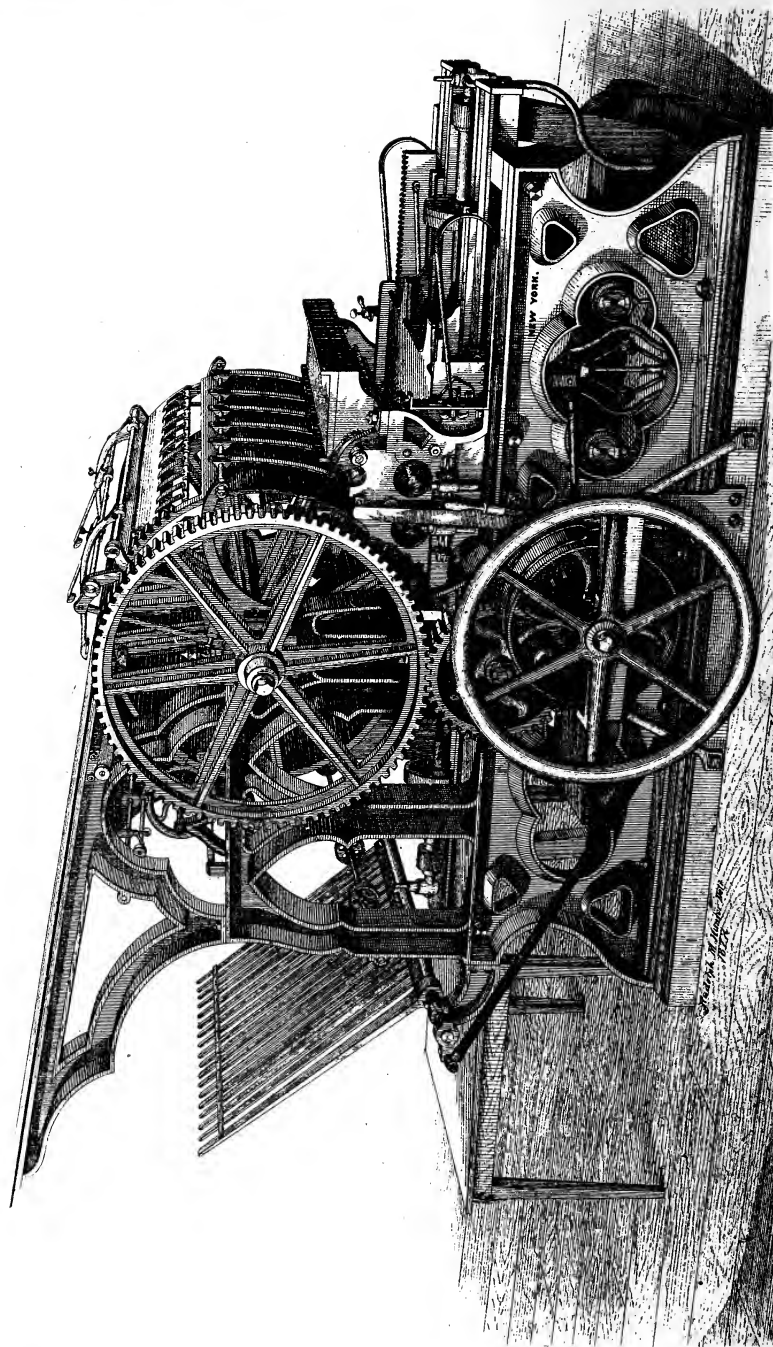
PHILADELPHIA:

PRESS OF BURK & McFETRIDGE, 304 CHESTNUT STREET.

1880.







SECTION I.

ENGINEERING.

Mr. RUDOLPH M. HUNTER, is a Consulting Engineer by profession—a calling pre-eminently necessary to the carrying on of a successful Patent business. There are many so-called “practical engineers” who claim a great knowledge of the arts and sciences, and many of the above have entered the Patent Soliciting business. What are these practical engineers? The question is easily answered: they usually emerge as full-fledged “practical engineers” from the apprentice’s bench in some machine shop, and after learning the use of a vise, file, cold-chisel and hammer, they consider that they have sufficient knowledge to place themselves side by side with the engineer who has devoted the best part of his life to the close study and application of his profession, and who, after long years of study is honored with a diploma, certifying that he has made himself proficient in the arts and sciences. Such “practical engineers” then, as a general rule, are not to be depended on with important work, inasmuch as they are incapable of comprehending or using the mathematical demonstrations and calculations, which no “true” engineer can afford to do without.

Mr. HUNTER has had large experience as a Designing and Constructing Engineer, superintending iron works, foundries and machine works, and in designing, modelling and erecting all kinds of machinery, and has devoted much time to “Iron and Steel,” as regards the chemical and physical phenomena of smelting the former, and the manufacture of the latter.

It is evident, without argument, that the calling or profession of a "true" engineer is almost indispensable in the perfect practice before the Patent Office, since a thorough knowledge, both theoretical and practical, of the arts and sciences is necessary to do justice to the inventor or client.

It cannot be denied that an inventor feels a certain amount of satisfaction at finding that the attorney he engages takes in his invention at a glance, comprehends its advantages, its improvements, and shows himself competent to draw up an intelligent specification and a strong series of claims.

An attorney without a thorough knowledge of theoretical and applied Mechanics, Physics, Statics, Chemistry, Hydrostatics and Metallurgy, to say nothing of Geology, Botany, Astronomy, Surveying and Mathematics, is not the man an inventor should seek, for in no application for a patent does not one or more of the above sciences figure to some, and sometimes considerable extent.

This then shows the advantage of Mr. HUNTER's engineering qualifications over those who have not this scientific education, and also those self-styled Practical Engineers. A man who has not theory with his practice is not an engineer at all, and is not entitled to affix after his name the symbols of engineering.

PRACTICE AS AN EXPERT.

For some years past Mr. HUNTER has been practicing as a Mechanical Expert in the trial of Patent Causes before the Courts and Patent Office. This is one of the most difficult branches of the engineering profession, and few there are who ever attain any great standing in this branch, because those who profess to be Experts are generally those self-styled "practical engineers," whose highest education was the machinists' bench, and who are totally ignorant of the higher calling of the profession to the study of the aforementioned sciences.

The first part of Mr. HUNTER's business education was devoted to Patents and expert practice when he had charge of the Offices of Frank Millward, M. E. (now deceased) of Cincinnati. Mr.

Millward was, without doubt, one of the finest Experts in the country, which was shown by his being retained continually by the late Hon. Samuel S. Fisher, (former Commissioner of Patents,) Attorney at Law, whose record of cases and their decisions govern much of the litigation of the present day. Mr. Geo. Harding, the best counsel on patent law in the country, said of him, "Frank Millward, had he lived, would have made the best Expert in the country." The same opinion was entertained of him by such men as Hon. D. P. Holloway of Washington, and Hon. J. M. Thacher of Chicago, (both were former Commissioners of Patents,) and many other prominent men of the country. This Expert was Mr. HUNTER's counsel, and to him he gives all credit for the great help he gave him in this line of his practice.

As an Expert, Mr. HUNTER examines into the validity of patents, infringement of one patent on another, of a machine on a patent, the patentability of an article or machine, the state of the art, etc., and gives affidavits and testimony in such cases as desired or required.

Although experting is especially adapted for Patent Causes before the Courts, yet it also plays an important part in soliciting patents before the Patent Office, when the attorney is an Expert; and an observing inventor will readily perceive the advantage of engaging an "Expert" to prepare and prosecute his application for a patent before that Office.

PRELIMINARY EXAMINATIONS.

Inventors as a rule, after having spent much time, money and study to develop and perfect an invention, immediately assert, that it is new, and are very unwilling to be convinced that it has been anticipated; and instead of making a preliminary examination at a very small cost, if there be the slightest doubt as to its novelty, they hastily file an application for a patent at considerable expense, with no assurance that they will obtain anything worth calling a "Patent."

By a preliminary examination we mean, an examination of the files in the Patent Office of all patents in the class to which the invention relates, from their earliest date to the present day, exclusive of pending applications and caveats. This examination shows an inventor what he is liable to conflict with should he file his application, and should he be anticipated it will save him the expense incurred in filing an application for a patent.

It is easy enough to get a patent, but usually difficult to get a good sound set of claims attached to the seal, whence the value of a preliminary examination.

In nearly all cases then, we advise the inventor to make or have made a preliminary examination, and follow the old proverb—"be sure you are right, and then go ahead."

It is often possible for us to refer at once to some reference which anticipates an invention, in which case we advise the inventor to save his money and time.

Inventors sometimes think that, as Patent Attorneys, we ought to be ready at once to decide upon the novelty of the invention, but in this they err. It would be utterly impossible that we, or anyone else could keep such an immense stock of knowledge ever before our mind for the benefit of inventors, yet if it be in our power to save our client his money and time, by referring him at once to a reference which anticipates his invention, we gladly do so without charge.

ATTORNEYS.

The requirements of the Patent Office to grant a patent on an invention is, that there shall be some degree of utility and a small percentage of novelty. This being the case, it is very readily seen that in most any case a patent can be obtained, but it must not be imagined that such a patent is always of great value. This value of the patent depends greatly upon the skill of the attorney; and, that inventors shall not be led off by vain promises and claims to the possession of greater facilities except capacity and diligence, the "Rules and Practice" of the Patent Office contain the following: "*As the value of patents depends*

largely upon the careful preparation of the specifications and claims, the assistance of competent counsel will, in most cases, be of advantage to the applicant ; but the value of their services will be proportionate to their skill and honesty, and too much care cannot be exercised in their selection. The Office cannot assume responsibility for the acts of attorneys, nor can it assist applicants in making selections. It will, however, be unsafe to trust those who pretend to the possession of any facilities except capacity and diligence for procuring patents in a shorter time or with broader claims than others."

A great snare to the inventor is the contingent-fee practice of some unscrupulous attorneys, who entice him to become their client by vain and deceiving promises of little cost until the patent is allowed. As we have said before, that it was not difficult to obtain the patent, but the possession of the deed would not say that it was worth anything.

These contingent-fee men, who have nothing to lose and everything to gain, will be satisfied to take "a drop in the bucket, when he was entitled to the bucketful" for the sake of getting the allowance of the application, and (better to his mind) the fees in the case. To inventors employing such attorneys we may say : "Blessed are they who expect nothing, for they shall not be disappointed."

Our friend and patron, the late Hon. S. S. Fisher, (Commissioner of Patents,) was among the first to openly call the attention of the public to these contingent-fee men, and in his Report of 1869 he says : "*They are those who care for nothing but to give their clients something called a patent, that they may secure their own fee, and who have in too many instances proved a curse ; to get rid of their clients and trouble, they have been sometimes content to take less than they were entitled to, while in many cases, they have with much self-laudation, presented them with shadows when the substance was beyond their reach."*

We think enough has been said to convince an inventor that he cannot be too careful in selecting an attorney to transact his business ; and that an attorney who is well versed in the great study of the arts and sciences pertaining to engineering, and which have been briefly enumerated on page 6, and who has

had both practical and theoretical knowledge on the construction and operation of machinery, etc., and who practices as an expert, is far better qualified to attend to this business than the many machinists, clerks and lawyers who have entered its fold.

WHO MAY OBTAIN A PATENT.

A patent may be obtained by any person who has invented or discovered any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvement thereof, not known nor used by others in this country, and not patented nor described in any printed publication in this or any foreign country, before his invention or discovery thereof, and not in public use or on sale for more than two years prior to his application, unless the same is proved to have been abandoned; and by any person who, by his own industry, genius, efforts, and expense, has invented and produced any new and original design for a manufacture, bust, statue, alto-relievo, or bas-relief; any new and original design for the printing of woolen, silk, cotton, or other fabrics; any new and original impression, ornament, pattern, print, or picture to be printed, painted, cast, or otherwise placed on or worked into any article of manufacture; or any new, useful, and original shape or configuration of any article of manufacture, the same not having been known nor used by others before his invention or production thereof, nor patented nor described in any printed publication, upon payment of the fees required by law and other due proceedings had.

In case of the death of the inventor, the application may be made by, and the patent will issue to, his executor or administrator. In such case the oath will be made by the executor or administrator.

The receipt of letters-patent from a foreign government will not prevent the inventor from obtaining a patent in the United States unless the invention shall have been introduced into public use in the United States more than two years prior to the application. But every patent for an invention which has been

previously patented by the same inventor in a foreign country, will be so limited as to expire at the same time with the foreign patent, or, if there be more than one, at the same time with the one having the shortest unexpired term; but in no case will it be in force more than seventeen years.

APPLICATIONS FOR PATENTS.

If the inventor has had a preliminary examination made, and desires us to obtain a patent for his invention, or requests us to apply direct, we immediately prepare his case.

Applications for letters-patent of the United States must be made to the Commissioner of Patents. A complete application comprises the petition, specification, oath, drawings, model, or specimen, when required. The application must be completed and prepared for examination within two years after the filing of the petition; and in default thereof, or upon failure of the applicant to prosecute the same within two years after any action thereon, of which notice shall have been duly mailed to him or his agent, it will be regarded as abandoned, unless it shall be shown, to the satisfaction of the Commissioner, that such delay was unavoidable.

THE SPECIFICATION.

We have before spoken of the value of a clear and explicit specification, and the knowledge required by the attorney to prepare such, hence we shall now merely speak of the requirements of the specification.

The specification is a written description of the invention or discovery, and of the manner and process of making, constructing, compounding, and using the same, and is required to be in

such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, compound, and use the same.

In applications for patents upon mere improvements, the specification must particularly point out the parts to which the improvement relates, and must by explicit language distinguish between what is old and what is claimed as the improvement ; and in such cases the description and the drawings, as well as the claims, should be confined to the specific improvements and such parts as necessarily co-operate with them.

Every applicant must distinctly state, under oath, whether the invention has been patented to himself or to others with his consent or knowledge in a foreign country, and, if it has been, that, according to his knowledge and belief, the same has not been in public use in the United States for more than two years prior to the application in this country ; and he must also name such foreign country and set forth the number and date of the patent.

Two or more independent inventions cannot be claimed in one application ; but where several distinct inventions are dependent upon each other and mutually contribute to produce a single result, they may be claimed in one application.

If several inventions, claimed in a single application, shall be found to be of such a nature that a single patent may not be issued to cover them, the inventor will be required to limit the description and claim of the pending application to whichever invention he may elect ; the other inventions may be made the subjects of separate applications, which must conform to the rules applicable to original applications. If the independence of the inventions be clear, such limitations will be made before any action upon the merits ; otherwise it may be made at any time before final action thereon, in the discretion of the examiner.

When an applicant makes two or more applications relating to the same subject-matter of invention, all showing, but only one claiming, the same thing, those not claiming it must

contain disclaimers thereof, with references to the applications claiming it.

The specification must be signed by the inventor or by his executor or administrator, and the signature must be attested by two witnesses. Full names must be given, and all names, whether of applicants or witnesses, must be legibly written.

An invention may be novel and useful, but a patent on such an invention, if not properly prepared, as regards the specification, claims and drawings, may be perfectly worthless. Owing to the great number of patents issued which are positively valueless, the Patent Office published the following :

“As the value of patents depends largely upon the careful preparation of the specifications and claims, the assistance of competent counsel will, in most cases, be of advantage to the applicant; but the value of their services will be proportionate to their skill and honesty, and too much care cannot be exercised in their selection.”

No one can know the value of, describe and prepare the claims of an invention, better than a “true” engineer and expert, who has devoted his life to patent business.

THE CLAIMS.

The claims follow immediately after the specification, and are the subject-matter which mainly governs the strength and value of the patent. It is hardly needful of remark here, that an attorney uneducated in the arts, scientific and technical studies, cannot clearly understand the improvements, and what are the valuable points of the invention unless it be very simple. When the invention lies in metallurgy, physics, chemistry or medical appliances, there are very, very few attorneys who could draw up even a comprehensive specification and claims, to say nothing of giving strength and value to the same. Hence we feel justified in again referring you to the remarks on page 8.

The specification must conclude with a specific and distinct claim or claims of the part, improvement, or combination which the applicant regards as his invention or discovery.

THE OATH.

The applicant, if the inventor, must make oath or affirmation that he does verily believe himself to be the original and first inventor or discoverer of the art, machine, manufacture, composition, or improvement for which he solicits a patent, and that he does not know and does not believe that the same was ever before known or used; and shall state of what country he is a citizen, and where he resides. An applicant for reissue must also, in his oath, state that he verily believes the original patent to be inoperative or invalid, either by reason of a defective or insufficient specification, or by reason of the patentee claiming as his own invention or discovery more than he had a right to claim as new, and that the error arose by inadvertence, accident, or mistake, and without any fraudulent or deceptive intention.

If the application be made by an executor or administrator, the form of the oath will be correspondingly changed. The oath or affirmation may be made before any person within the United States authorized by law to administer oaths, or, when the applicant resides in a foreign country, before any minister, chargé d'affaires, consul, or commercial agent holding commission under the government of the United States, or before any notary public of the foreign country in which the applicant may be, the oath being attested in all cases, in this and other countries, by the proper official seal of the officer before whom the oath or affirmation is made.

THE DRAWINGS.

The applicant for a patent is required by law to furnish a drawing or drawings of his invention where the nature of the case admits of it.

The drawings attached to the application for a patent are usually looked upon by the attorney as of secondary importance. A greater mistake was never made. In many law suits the

*at the
Philadelphia
Exposition
of 1876
by
J. & W. Miller*

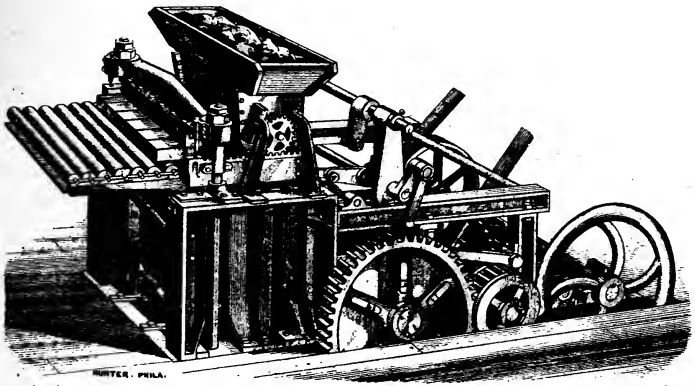


FIG. 1



FIG. 2

F. Sutcliff

Philadelphia



complainant or defendant has often lost his case for want of drawings explicit in detail, attached to his patent. Nothing sets off a patent so well, makes it clear of comprehension, and invariably produces the sale of the same, as a good set of drawings finely executed. Fine drawings attached to an application always induces an examiner to take more interest in the invention, for, after examining the wretched scrolls, called by some, drawings, his eyes turn with pleasure on the neatly and finely executed drawings accompanying our applications. Before the drawings are sent to the Patent Office, we reproduce them by the Heliographic process, and the duplicate we file with the other copies taken from the application, to be used when necessary in arguing or amending the case before the Office when the originals are no longer in our possession. This is *very* important, yet very few attorneys do it owing to the expense.

FOR FINELY FINISHED DRAWINGS WE ARE OPEN
TO COMPETITION WITH THE WORLD.

To show that fine drawings are appreciated by the Patent Office officials, to say nothing of outsiders, we refer you to the following letters, among others, from Hon. D. P. Holloway, late Commissioner of Patents, and Hon. J. M. Thacher, former Commissioner of Patents, written to Mr. HUNTER, at whose Western Offices drawings for them were made by his assistants, under his immediate supervision:

Washington, D. C.

Mr. R. M. Hunter:

Sir:—I cheerfully commend you to all whom it may concern, as a draughtsman of superior expertness. In my opinion the drawings you have made for the Patent Office were equal in every respect to those furnished by any other person.

Truly Yours,

D. P. HOLLOWAY,
Late Commissioner of Patents.

Chicago, Illinois.

R. M. Hunter, *Esq* :

We believe your drawings have been among the best filed in the Patent Office, and in fact have heard favorable criticisms from Patent Office Officials to this effect. We cheerfully recommend Mr. Hunter to any one having work of this kind to perform, as a THOROUGHLY SKILLED draughtsman.

COBURN & THACHER.

COBURN,
Attorney at Law.

THACHER,
Late Commissioner of Patents.

When Mr. Thacher joined Mr. Coburn in partnership he discharged his draughtsmen, and had all of his drawings prepared at Mr. HUNTER's Chicago Offices. Nearly all the Chicago Patent firms did the same.

Hon. Samuel S. Fisher, (late Commissioner of Patents,) appreciating the skill shown in the drawings attached to patents obtained by Mr. HUNTER, sent all of his cases to Mr. HUNTER's Cincinnati Offices to have the necessary drawings, etc., executed under his direction.

Phototypes by F. Gutekunst, of Philadelphia, of some of the ordinary drawings made at this establishment are distributed through this book, and as they are fac-similes of the drawings themselves, line for line, only reduced, the public can judge for themselves the finish which is given to drawings emerging from these Offices.

The reason that drawings from this establishment were not given to the public, as samples to copy after was simply this. Rule 50 of the "Practice" contains the following :

"All lines must be clean, sharp, and solid, and they must not be too fine or crowded. Surface shading, when used, should be open. Sectional shading should be made by oblique parallel lines, which may be about one-twentieth of an inch apart.

"Drawings should be made with the fewest lines possible consistent with clearness. By the observance of this rule the effectiveness of the work after reduction will be much increased. Shading (except on sectional views) should be used only on convex or concave surfaces, where it should be used sparingly,

and may even there be dispensed with if the drawing is otherwise well executed."

From these extracts it is readily seen that owing to the greater number of drawings sent to the Patent Office being scrolls, indicating that the majority of draughtsmen cannot use the drawing tools in an expert manner, the Patent Office is obliged to require the drawings to be made open, no shading to any extent, and no fine lines; for were a poor draughtsman to try to shade a Patent Office drawing, it would be an utter impossibility for the examiner to understand it, or for the photolithographer to reproduce it.

The Patent Office, in the following rule, advise inventors to employ skilled draughtsmen :

Applicants are advised to employ competent artists to make their drawings.

Several advantages of having good drawings are set out in Rule 50, of "Practice," without commenting on them :

"Three several editions of patent-drawings are printed and published: one for office use, certified copies, etc., of the size and character of those attached to patents, the work being about 6 by 9½ inches; one reduced to half that scale, or one-fourth the surface, of which four will be printed on a page to illustrate the volumes distributed to the courts; and one reduction—to about the same scale—of a selected portion of each drawing, to illustrate the Official Gazette."

We have special facilities for producing drawings, in which our Photographic and Heliographic departments figure most, as set forth in the final pages of this book.

We have also facilities for making working drawing for the construction of machines.

"OUR WORK SPEAKS FOR ITSELF."

MODELS.

The following paragraphs govern the requirements of models and specimens. We would advise all inventors to have their own models made, but where it is impracticable for them to do

so, we will have them made by our model-maker, under our strict supervision, and at actual cost :

In all cases which admit of representation by model, the applicant, if required, shall furnish a model to exhibit advantageously the several parts of his invention or discovery.

The model must clearly exhibit every feature of the machine which forms the subject of a claim of invention, but should not include other matter than that covered by the actual invention or improvement, unless it is necessary to the exhibition of the invention in a working model.

The model must be neatly and substantially made, of durable material, metal being deemed preferable ; but when a material forms an essential feature of the invention, the model will be constructed of that material. The model must not be more than one foot in length, width or height, except in cases in which the Commissioner shall admit working models of complicated machines of larger dimensions. If made of wood, it must be painted or varnished. Glue must not be used ; but the parts should be so connected as to resist the action of heat or moisture. Where practicable, to prevent loss, the model or specimen should have the name of the inventor permanently fixed thereon. In cases where models are not made strong and substantial, as here directed, the application will not be examined until a proper model is furnished.

A working model is often desirable, in order to enable the Office fully and readily to understand the precise operation of the machine.

SPECIMENS.

When the invention or discovery is a composition of matter, the applicant, if required by the Commissioner, shall furnish specimens of the composition, and of its ingredients, sufficient in quantity for the purpose of experiment. In all cases where the article is not perishable a specimen of the composition claimed, put up in proper form to be preserved by the Office, must be furnished.

The Application before the Patent Office.

All cases in the Patent Office are classified and taken up for examination in regular order, those in the same class being examined and disposed of, as far as practicable, in the order in which the respective applications are completed.

The first step in the examination of an application will be to determine whether it is, in all respects, in proper form. If, however, the objections as to form are not vital, the examiner may proceed to the consideration of the application on its merits; but in such case he must, if possible, in his first letter to the applicant, state all his objections, whether formal or otherwise, and until the formal objections are disposed of no further action will be taken upon its merits without the order of the Commissioner.

The contingent-fee men consider that as soon as the application is filed they have ended their work, but with us the real work then begins. We do not profess to have greater facilities to push a case through the Patent Office than that due to diligence, capacity and skill. The Commissioner of Patents warns inventors to beware of those who profess other facilities. He says: "*It will, however, be unsafe to trust those who pretend to the possession of any facilities, except capacity and diligence for procuring patents in a shorter time or with broader claims than others.*"

When an attorney is honorable and does his best for his client, the examiners respect him, and naturally he has a better standing before the Patent Office, which, of course, helps him prosecute his clients' interest with more effect.

After the application has been examined, it is either rejected or allowed. If rejected on one or more claims, the references to them are sent to us, and if we do not consider that they meet the claim, we file an argument to that effect setting forth the differences, etc., or we may amend them whereby the strength

of the claim is not diminished, but the references become no longer pertinent. If the examiner again rejects the unaltered claims we may appeal to a higher tribunal. We are at liberty to amend a claim as often as the examiner rejects it, so long as the subject-matter is materially altered. When we are positive that the reference does not meet the claim the appeal is the best course for the inventor to pursue.

Should the application be allowed we are at once notified, and due notice of such allowance is immediately sent to the inventor.

Now the inventor has the liberty of either ordering the patent to issue at once, or of allowing it to remain in the secret archives of the Patent Office (where it is substantially in the same position as a caveat), for the purpose of applying for a foreign patent, (note Section II) before his invention is published in this country, but this delay must not be longer than five months and nine days from the date of allowance, or the case will be considered abandoned.

If, on examination, it shall appear that the applicant is justly entitled to a patent under the law, a notice of allowance will be sent him, calling for the payment of the final fee, upon the receipt of which, within the time fixed by law, the patent will be prepared for issue.

After notice of the allowance of an application is given, the case will not be withdrawn from issue except by approval of the Commissioner, and if withdrawn for further action on the part of the Office, a new notice of allowance will be given.

DATE, DURATION AND FORM OF PATENTS.

Every patent will bear date as of a day not later than six months from the time at which the application was passed and allowed, and notice thereof was mailed to the applicant or his agent, if within that period the final fee be paid to the Commissioner of Patents, or if it be paid to the treasurer, or any of the assistant treasurers, or designated depositaries of the United States, and the certificate promptly forwarded to the

Commissioner of Patents; and if the final fee be not paid within that period, the patent will be withheld.

A patent will not be antedated.

Every patent will contain a short title of the invention or discovery, indicating its nature and object, and a grant to the patentee, his heirs and assigns, for the term of seventeen years, of the exclusive right to make, use, and vend the invention or discovery throughout the United States and the Territories thereof. But if the invention shall have been previously patented abroad, the term of the patent will expire with the term of the foreign patent. The duration of a design patent may be for the term of three and a-half, seven, or fourteen years. A copy of the specification and drawings will be annexed to the patent and form part thereof.

DELIVERY OF PATENT.

When a patent is received, we place it in a fine morocco case, especially designed and manufactured for us. This always allows the inventor to carry his patent with him without injury, and he is always pleased to take it out to show his friends.

ABANDONED, FORFEITED, AND RE-NEWED APPLICATIONS.

An abandoned application is one which has not been completed and prepared for examination within two years after the filing of the petition, or which the applicant has failed to prosecute within two years after any action therein, of which notice has been duly given, or which the applicant has expressly abandoned by filing, in the Office, a written declaration of abandonment, signed by himself, identifying his application by title of invention and date of filing.

Prosecution of an application, to save it from abandonment, must include such proper action as the conditions of the case may require.

When a new application is filed in place of an abandoned or rejected application, a new specification, oath, drawing, and fee will be required, but the old model, if suitable, may be used.

A forfeited application is one upon which a patent has been withheld for failure to pay the final fee within the prescribed time.

Where the patent has been withheld by reason of non-payment of the final fee, any person, whether inventor or assignee, who has an interest in the invention for which such patent was ordered to issue, may file a new application for the same invention; but such second application must be made within two years after the allowance of the original application. Upon the hearing of such new application, abandonment will be considered as a question of fact.

We pay particular attention to all mismanaged applications which have become abandoned, forfeited, or not properly attended to by other attorneys.

EXTENSIONS.

No patent granted since March 2, 1861, can be extended except by Act of Congress.

CAVEATS.

A caveat, under the patent law, is a notice given to the Office of the caveator's claim as inventor, in order to prevent the grant of a patent to another for the same alleged invention upon an application filed during the life of the caveat without notice to the caveator.

Any citizen of the United States who has made a new invention or discovery, and desires further time to mature the same, may file in the Patent Office a caveat setting forth the object and the distinguishing characteristics of the invention, and praying protection of his right until he shall have matured his invention. Such caveat shall be filed in the confidential archives of the Office and preserved in secrecy, and shall be operative for the term of one year from the filing thereof.

An alien has the same privilege, if he has resided in the United States one year next preceding the filing of his caveat, and has made oath of his intention to become a citizen.

The caveat must comprise a specification, oath, and, when the nature of the case admits of it, a drawing, and, like the application must be limited to a single invention or improvement.

The same particularity of description is not required in a caveat as in an application for a patent; but the caveat must set forth the object of the invention and the distinguishing characteristics thereof, and it should be sufficiently precise to enable the Office to judge whether there is a probable interference when a subsequent application is filed.

When practicable, the caveat should be accompanied by full and accurate drawings, separate from the specification, well executed on tracing muslin or paper that may be folded.

If at any time within one year after the filing or renewal of a caveat another person shall file an application with which such caveat would in any manner interfere, and if, within the year, the application shall be found patentable, then such application will be suspended, and notice thereof will be sent to the person filing the caveat, who, if he shall file a complete application within the prescribed time, will be entitled to an interference with the previous application, for the purpose of proving priority of invention, and obtaining the patent, if he be adjudged the prior inventor. The caveator if he would avail himself of his caveat, must file his application within three months from the expiration of the time regularly required for the transmission to him of the notice deposited in the post-office at Washington; and the day when the time for filing expires will be mentioned in the notice or endorsed thereon.

The caveator will not be entitled to notice of any application pending at the time of filing his caveat, nor of any application filed after the expiration of one year from the date of the filing or renewal thereof. The caveat may be renewed by the payment of a second caveat fee, and it will continue in force for one year from the payment of such second fee, and so on from year to year for not more than two years. If a caveat be not

renewed, it will still be preserved in the secret archives of the Office.

A caveat confers no rights and affords no protection except as to notice of an interfering application filed during its life, giving the caveator the opportunity of proving priority of invention if he so desires. It may be used as evidence in contests.

DESIGN PATENTS.

A patent for a design may be granted to any person, whether citizen or alien, who, by his own industry, genius, efforts and expense, has invented and produced any new and original design for a manufacture, bust, statue, alto-relievo, or bas-relief; any new and original design for the printing of woolen, silk, cotton or other fabrics; any new and original impression, ornament, pattern, print or picture to be printed, painted, cast or otherwise placed on or worked into any article of manufacture; or any new, useful and original shape or configuration of any article of manufacture, upon payment of the duty required by law, and other due proceedings had, as in other cases of inventions or discoveries.

Patents for designs are granted for the term of three and one-half years, or for seven years, or for fourteen years, as the applicant may, in his application, elect.

The proceedings in applications for patents for designs are substantially the same as in applications for other patents. The specification must distinctly point out the characteristic features of the design, and carefully distinguish between what is old and what is believed to be new. The claims also, when the design admits of it, should be as distinct and specific as in the case of other patents.

Whenever a photograph or an engraving is employed to illustrate the design it must be mounted upon Bristol-board, 10 by 15 inches in size, and properly signed and witnessed. The applicant will be required to furnish ten extra copies of such photograph or engraving (not mounted), of a size not exceeding 7½ inches by 11. Negatives are not required.

Whenever the design is represented by a drawing made to conform to the rules laid down for drawings of mechanical inventions but one copy need be furnished. Additional copies will be supplied by the photo-lithographic process at the expense of the Office.

The cost of design patents is much less than functional patents.

TRADE MARKS.

Any person or firm domiciled in the United States, and any corporation created by the authority of the United States, or of any State or Territory thereof, and any person, firm, or corporation resident of or located in any foreign country which, by treaty or convention, affords similar privileges to citizens of the United States, and who are entitled to the exclusive use of any lawful trade mark, or who intend to adopt and use any trade mark for exclusive use within the United States, may obtain protection for such lawful trade mark by complying with the following requirements, to wit:

First. By causing to be recorded in the Patent Office the names of the parties, and their residences and place of business, who desire the protection of the trade mark.

Second. The class of merchandise and the particular description of goods comprised in such class, by which the trade mark has been or is intended to be appropriated.

Third. A description of the trade mark itself, with twelve facsimiles thereof, and the mode in which it has been or is intended to be applied and used.

Fourth. The length of time, if any, during which the trade mark has been used.

Fifth. The filing of a declaration, under the oath of the person, or of some member of the firm or officer of the corporation, to the effect that the party claiming protection for the trade mark has a right to the use of the same, and that no other per-

son, firm or corporation has a right to such use, either in the identical form or having such near resemblance thereto as might be calculated to deceive, and that the description and fac-similes presented for record are true copies of the trade mark sought to be protected. The oath must also state the citizenship of the person desiring registration.

The petition asking for registration should be accompanied with a distinct statement or specification, setting forth the domicile and residence of the applicant, the length of time the trade mark has been used, the mode in which it is intended to apply it, and the particular description of goods comprised in the class by which it has been appropriated, and giving a full description of the design proposed, particularly distinguishing between the essential and the non-essential features thereof.

The protection for such trade mark will remain in force for thirty years, and may, upon the payment of a second fee, be renewed for thirty years longer, except in cases where such trade mark is claimed for, and applied to, articles not manufactured in this country, and in which it receives protection under the laws of any foreign country for a shorter period, in which case it shall cease to have force in this country, by virtue of the registration, at the same time that it becomes of no effect elsewhere.

No proposed trade mark will be received or recorded which is not and cannot become a lawful trade mark, or which is merely the name of a person, firm or corporation only, unaccompanied by a mark sufficient to distinguish it from the same name when used by other persons, or which is identical with a trade mark appropriate to the same class of merchandise and belonging to a different owner, and already registered or received for registration, or which so nearly resembles such last-mentioned trade mark as to be likely to deceive the public; but any lawful trade mark rightfully used at the time of the passage of the act relating to trade marks (July 8, 1870), may be registered.

In case of conflicting applications for registration, the Office reserves the right to declare an interference, in order that the

parties may have opportunity to prove priority of adoption or right; and the proceedings on such interference will follow, as nearly as practicable, the practice in interferences upon applications for patents.

Where the trade mark can be represented by a fac-simile which conforms to the rules for drawings of mechanical patents, such a drawing may be furnished by applicant, and the additional copies will be produced by the photo-lithographic process, at the expense of the Office.

The right to the use of any trade mark is assignable by any instrument of writing, and such assignment must be recorded in the Patent Office within sixty days after its execution, in default of which it shall be void as against any subsequent purchaser or mortgagee for a valuable consideration, without notice. The fees will be the same as are prescribed for recording assignments of patents.

REGISTRATION OF PRINTS AND LABELS.

By an act of Congress entitled, "An act to amend the law relating to patents, trade marks and copyrights," approved June 18, 1874, (to take effect on and after the 1st day of August, 1874), it is provided in the 3d Section thereof, that certain prints and labels may be registered in the Patent Office.

SEC. 3. That in the construction of this act, the words "engraving," "cut," and "print" shall be applied only to pictorial illustrations or works connected with the fine arts, and no prints or labels designed to be used for any other articles of manufacture shall be entered under the copyright law, but may be registered in the Patent Office. And the Commissioner of Patents is hereby charged with the supervision and control of the entry or registry of such prints or labels, in conformity with the regulations provided by law as to copyright or prints, except that there shall be paid for recording the title of any print or label, not a trade mark, six dollars, which shall cover

the expense of furnishing a copy of the record under the seal of the Commissioner of Patents, to the party entering the same.

SEC. 4. That all laws and parts of laws inconsistent with the foregoing provisions be and the same are hereby repealed.

SEC. 5. That this act shall take effect on and after the first day of August, eighteen hundred and seventy-four.

By the word "print," as used in the said act, is meant any device, picture, word or words, figure or figures, not a trade mark), impressed or stamped directly upon the articles of manufacture, to denote the name of the manufacturer or place of manufacture, style of goods, or other matter.

By the word "label," as therein used, is meant a slip or piece of paper, or other material, to be attached in any manner to manufactured articles, or to bottles, boxes, and packages containing them, and bearing an inscription, (not a trade mark), as, for example: the name of the manufacturer or the place of manufacture, the quality of goods, directions for use, &c.

By the words "articles of manufacture"—to which such print or label is applicable by said act—is meant all vendible commodities produced by hand, machinery or art.

But no such print or label can be registered unless it properly belongs to an article of commerce, and be as above defined; nor can the same be registered as such print or label when it amounts to a lawful trade mark.

To entitle the owner of any such print or label to register the same in the Patent Office, it is necessary that five copies of the same, with proper title affixed, be filed, one of which copies shall be certified under the seal of the Commissioner of Patents, and returned to the registrant.

The certificate of such registration will continue in force for twenty-eight years.

NOTE.

The registration of copyright matter is, by law, under the control of the Librarian of Congress at Washington. At the time of the enactment of the trade mark law of July 8, 1870, it was the custom of the Librarian of Congress to enter, under

the provisions of the copyright law, labels and prints of commerce, many of which embraced legal trade marks. Notwithstanding the existence of a separate statute in 1870 for the registration of trade marks, the Librarian of Congress, in entering labels and prints of commerce, gave a semblance of protection to many trade marks, of which the labels and prints entered by him were the mere vehicles. To remedy this difficulty was the object of the amendment to the copyright law of June 18, 1874, referred to herein as the act for the registration of prints and labels. By this amendatory act the Librarian of Congress is restricted, in the registry of copyright matter, to pictorial illustrations or works connected with the fine arts, and is prohibited from registering labels or prints designed to be used for any other articles of manufacture, *i. e.*, articles of commerce. These are now registrable at the Patent Office; while matter properly coming within the definition of copyright subject-matter, as contained in the act of June 18, 1874, is registrable at the office of the Librarian of Congress.

COPIES OF PATENTS.

Fac-simile printed copies of the drawings and specifications of any patent issued since November 20, 1866, can be had at a cost of fifty cents. When ordering, send us the name of the patentee, invention, and number and date of the patent.

REISSUES.

Owing to the practice of attorneys without character, or by inadvertence or mistake, many of the patents which are issued are invalid and valueless. The Law provides in such cases that the invalid patents may be reissued, which signifies that a new patent will be granted upon the surrender of the old one, and that in obtaining the reissue the inventor is at liberty to correct any error made in the original patent either in the specification or claim.

These reissue applications require much careful thought on the part of the attorney, and necessitates that the attorney in most cases be well versed in the arts and sciences to prosecute the same with a clear understanding.

If inventors would be particular as to the attorneys they engage to obtain the original patent, the necessity of reissuing the same will be obviated.

A reissue is granted to the original patentee, his legal representatives, or the assignees of the entire interest, when, by reason of a defective or insufficient specification, or by reason of the patentee claiming as his invention or discovery more than he had a right to claim as new, the original patent is inoperative or invalid, provided the error has arisen from inadvertence, accident, or mistake, and without any fraudulent or deceptive intention. In the cases of patents issued and assigned prior to July 8, 1870, the applications for reissue may be made by the assignees; but, in the cases of patents issued or assigned since that date, the applications must be made and the specification sworn to by the inventors, if they be living.

The petition for a reissue must be accompanied with a certified copy of the abstract of title, giving the names of all assignees owning any undivided interest in the patent; and in case the application is made by the inventor, it must be accompanied with the written assent of such assignees.

No new matter shall be introduced into the reissue specification, nor in case of a machine shall the model or drawings be amended except each by the other; but, when there is neither model nor drawing, amendments may be made upon proof satisfactory to the Commissioner that such new matter or amendment was a part of the original invention, and was omitted from the specification by inadvertence, accident, or mistake.

The Commissioner may, in his discretion, cause several patents to be issued for distinct and separate parts of the thing patented, upon demand of the applicant, and upon payment of the required fee for each division of such reissued letters-patent.

The application for a reissue must be accompanied by a surrender of the original patent, or, if that is lost, by an affidavit

to that effect and a certified copy of the patent ; but if a reissue be refused, the original patent will, upon request, be returned to the applicant.

Matter which is shown and described, and might have been lawfully claimed, in an unexpired patent, but was not claimed by reason of a defect or insufficiency in the specification, arising from inadvertence, accident, or mistake, and without fraud or deceptive intent, cannot be subsequently claimed by the patentee in a separate patent, but only in a reissue of the original patent.

ASSIGNMENTS.

Every patent or any interest therein shall be assignable in law by an instrument in writing ; and the patentee or his assigns or legal representatives may, in like manner, grant and convey an exclusive right under his patent to the whole or any specified part of the United States.

Interests in patents may be vested in assignees, in grantees of exclusive sectional rights and mortgages, and in licensees.

(1.) An assignee is a transferee of the whole interest of the original patent, or of an undivided part of such whole interest, extending to every portion of the United States. The assignment must be written or printed and duly signed.

(2.) A grantee acquires by the grant the exclusive right, under the patent, to make and use, and to grant to others the right to make and use, the thing patented, within and throughout some specified part of the United States, excluding the patentee therefrom. The grant must be written or printed and duly signed.

(3.) A mortgage must be written or printed and duly signed.

(4.) A licensee takes an interest less than or different from either of the others. A license may be oral, or written or printed and duly signed.

An assignment, grant, or conveyance will be void as against any subsequent purchaser or mortgagee for a valuable consideration, without notice, unless recorded in the Patent Office within three months from the date thereof.

No instrument will be recorded which does not, in the judgment of the Commissioner, amount to an assignment, grant, mortgage, lien, encumbrance, or license, or affect the title of the patent or invention to which it relates.

In every case where it is desired that the patent shall issue to an assignee, the assignment must be recorded in the Patent Office at a date not later than the day on which the final fee is paid. The date of the record is the date of the receipt of the assignment at the Office.

INTERFERENCES.

An interference is a proceeding instituted for the purpose of determining the question of priority of invention between two or more parties claiming substantially the same patentable invention. The fact that one of the parties has already obtained a patent will not prevent an interference; for, although the Commissioner has no power to cancel a patent, he may grant a patent for the same invention to another person who proves himself to be the prior inventor.

Interferences will be declared in the following cases, when all the parties claim substantially the same patentable invention :

- (1.) Between two or more original applications.
- (2.) Between an original application and an unexpired patent, when the applicant, having been rejected on the patent, shall file an affidavit showing that he made the invention before the patentee's application was filed.
- (3.) Between an original application and an application for the reissue of a patent granted during the pendency of such original application.
- (4.) Between an original application and a reissue application, when the original applicant shall file an affidavit

showing that he made the invention before the patentee's original application was filed.

(5.) Between two or more applications for the reissue of patents granted on applications pending at the same time.

(6.) Between two or more applications for the reissue of patents granted on applications not pending at the same time, when the applicant for reissue of the later patent shall file an affidavit showing that he made the invention before the application on which the earlier patent was granted was filed.

(7.) Between a reissue application and an unexpired patent, if the original applications were pending at the same time, and the reissue applicant shall file an affidavit showing that he made the invention before the original application of the other patentee was filed.

(8.) Between an application for reissue of a later unexpired patent and an earlier unexpired patent granted before the original application of the later patent was filed, if the reissue applicant shall file an affidavit showing that he made the invention before the original application of the earlier patent was filed.

An applicant involved in an interference may, before the date fixed for the filing of his statement, in order to avoid the continuance of the interference, disclaim, over his own signature, attested by two witnesses, the invention of the particular matter in issue, and upon such disclaimer and the cancellation of any claims involving such interfering matter, judgment shall be rendered against him, and the disclaimer shall be embodied in and form part of his specification.

Each party to the interference will be required to file a concise statement, under oath, showing the date of his original conception of the invention, of its illustration by drawing or model, of its disclosure to others, of its completion, and of the extent of its use. The parties will be strictly held in their proof to the dates set up in their statements. The statement must be sealed

up before filing (to be opened only by the examiner of interferences), and the name of the party filing it, the title of the case, and the subject of the invention indicated on the envelope. The statements shall not be open to the inspection of the opposing parties until both shall have been filed, or the time for filing both with any extension thereof shall have expired, nor then, unless they have been examined by the proper officer and found to be satisfactory.

If either party to an interference fail to file a statement, or if the statement of either party fail to overcome the *prima facie* case made by the respective dates of application, the other may demand an immediate adjudication of the case upon the record.

Where there are more than two parties to the interference, and any of them fail to file their statements, judgment may be rendered upon the record as to such parties, and the interference will proceed between the remaining parties.

If any party to an interference fail to file a statement, no testimony will subsequently be received from him to prove that he made the invention at a date prior to his application.

A time will be assigned in which the junior applicant shall complete his testimony in chief and a further time in which the other party shall complete the testimony on his side, and a further time in which the junior applicant may take rebutting testimony, but shall take no other. If there be more than two parties, either patentees or applicants, the times for taking testimony will be so arranged, that each shall have an opportunity to prove his case against prior applicants and to rebut their evidence, and also to meet the evidence of junior applicants.

If either party fail to take his testimony within the time assigned to him, all junior applicants having duly taken theirs, the case may, on motion duly made and served on such party, be set for hearing at any time not less than ten days after the hearing of the motion.

A second interference will not be declared upon a new application on the same invention filed by either party, nor will a decision be set aside after judgment, except in accordance with the principles governing the granting of new trials.

When a part only of the claims of an application are involved in an interference, the applicant may withdraw from his application the claims adjudged not to interfere, and file a new application therefor, if the application can be legitimately divided, and if no more of the devices claimed in one is shown or described in the other than is necessary to an intelligent understanding of the invention claimed in the latter: *Provided*, That no claim shall be made in the second application broad enough to include matter claimed in the first application as amended.

APPEALS.

Every applicant for a patent or the reissue of a patent, any of the claims of whose application have been twice rejected upon grounds involving the merits of the invention, such as lack of novelty or utility, abandonment, public use, or want of identity of invention either in amended or in reissue applications, may appeal from the decision of the primary examiner to the board of examiners-in-chief. The appeal must be made in writing, signed by the party, or his duly authorized agent or attorney, setting forth the points of the decision upon which the appeal is taken and duly filed.

There must be two rejections of the claims as originally filed, or, if amended in matter of substance, of the amended claims, and all the claims must be passed upon, and all preliminary and intermediate questions relating to matters not affecting the merits of the invention settled, before the case is appealed to the examiners-in-chief.

Upon the filing of the appeal the same shall be submitted to the primary examiner, who, if he finds the appeal to be regular in form, shall furnish the examiners-in-chief with a written statement of the grounds of his decision on all the points involved in the appeal, with copies of the rejected claims, and with the references applicable thereto. If the primary examiner shall decide that the appeal is not regular in form, an appeal from such decision may be taken directly to the Commissioner.

From the adverse decision of the board of examiners-in-chief appeal may be taken to the Commissioner in person.

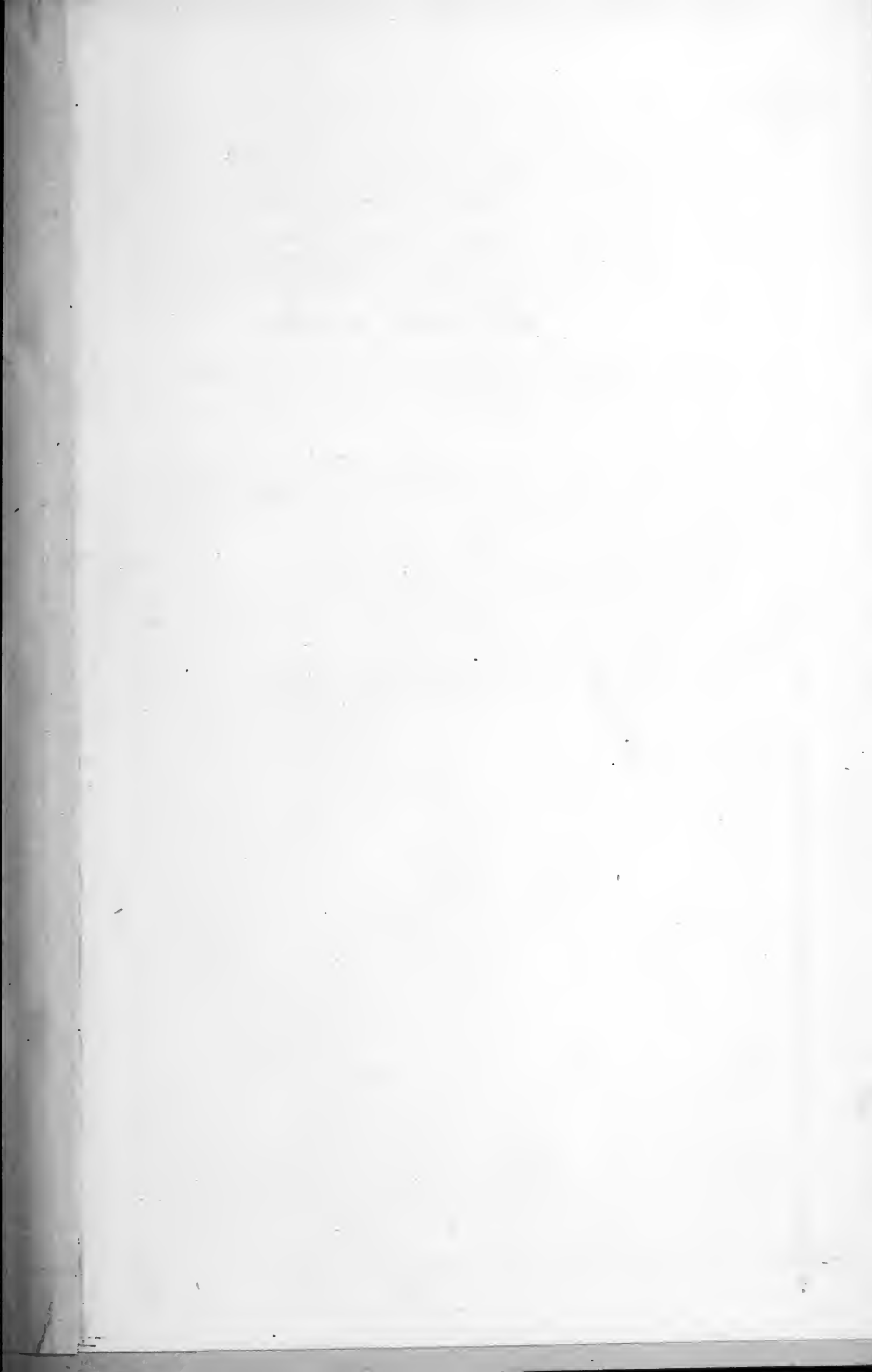
From the adverse decision of the Commissioner upon the claims of an application an appeal may be taken to the Supreme Court of the District of Columbia sitting *in banc*.

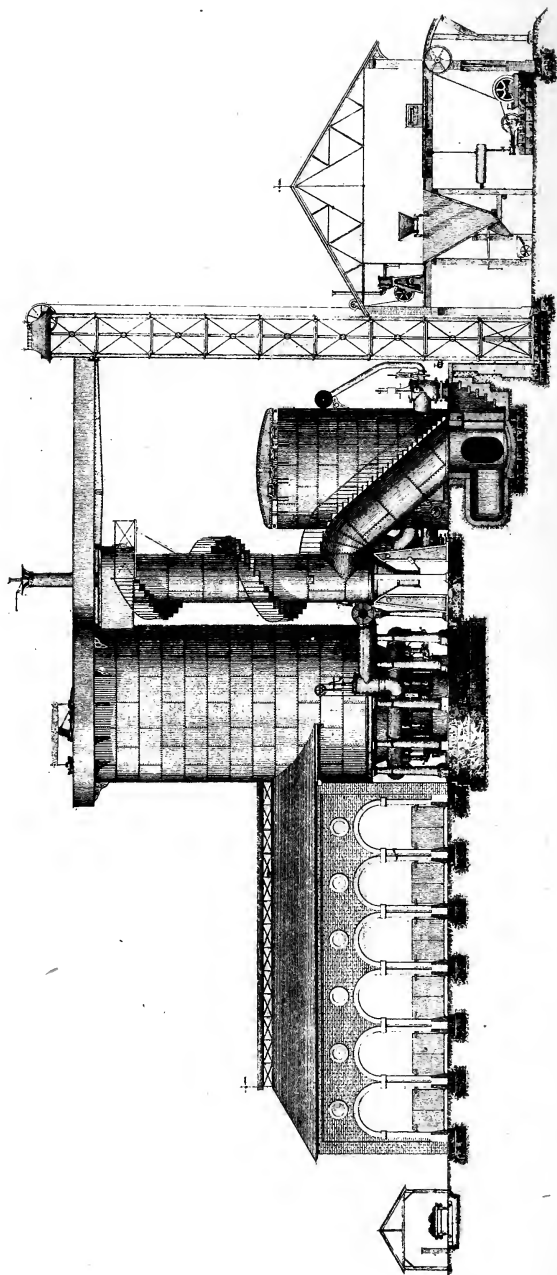
PATENT LAW.

When, during the prosecution of an application before the Patent Office, any issue arises in which legal counsel is required, such counsel is always given. We have special arrangements with the best patent counsel in the country, who will attend to all patent causes which may arise within these Offices, relating either to patents or applications therefor.

It has been our rule not to have our cases thrown from one hand to another, but to have all, even to legal suits, carried on under our supervision, and which is to the interest of our clients and ourselves.

By having the necessary arrangements for carrying our applications and patents through the Patent Office and Courts, our establishment becomes complete, and demands a continuance of the patronage it has so successfully held.





Phototype 8

F. Gutchard.

Philadelphia.

SECTION II.

FOREIGN PATENTS.

This is a department of the establishment to which great care is given. While the United States is a large and profitable field for the development and operation of inventions, the inventors must not lose sight of the fact that across the water there are manufacturing countries which afford also very advantageous fields for the introduction of new and useful inventions, and that patents can be obtained in foreign countries ; yet American inventors cannot be too cautious in engaging attorneys to obtain for them these Foreign Patents.

There are many attorneys in this country, particularly the unscrupulous contingent-fee men, who will deliberately obtain a Foreign Patent, when the time in which to obtain it has passed, and the patent when granted is valueless.

Again, the papers are required to be specially prepared for the different countries. Take the British Patents for instance : a patent which is strong and properly prepared for this country is usually in that form, unfit for a British Patent. The Foreign Patents should be very different documents from those issued in this country, if properly prepared.

Again, we very often include several separate United States Patents in one English Patent, and thereby save the applicant much expense ; but to do this, it requires much care and good wording.

As most of the foreign countries grant patents without examining them, an inventor cannot be too careful in the agent he employs to draw up his papers.

We have agents in all the principal countries, who are among the most prominent firms in their respective countries. Our London House is the large and influential firm of Messrs. HAS-ELTINE, LAKE & Co., Southampton Buildings.

In the subsequent pages will be found very full information regarding Foreign Patents, and the requirements to obtain them, their life, and what is necessary to keep them in life.

Any questions not answered in these pages, will be cheerfully answered to any one putting the interrogatories to us, either personally or by mail.

AUSTRO-HUNGARIAN EMPIRE.

Patents are granted to subjects or aliens, without examination as to utility or novelty, for the term of fifteen years, or during the continuance of prior foreign grants.

Applications may be made for a shorter period, before the expiration of which the grant may be prolonged by petition and on production of the Patent upon which such prolongation is confirmed.

Valid grants can only be obtained by aliens if they are the original Patentees or Assigns in another country, and then only if the invention has not been worked in the Empire, and on production of the original prior foreign *grant* (not specification) or a certified copy of the same.

Even under these conditions proof is required that the grant upon which the Austrian application is based has not been permitted to lapse by non-payment of taxes or from other causes.

The day and hour of application settle the priority of the alleged invention, but the exclusive privileges begin from the date of grant or delivery of Letters-Patent.

The invention must be worked within one year from the date of grant, and working must not be discontinued for any two entire consecutive years. This rule is strictly enforced, and at least one practical machine must be manufactured and worked in the Empire within the year. In case the invention is a

process, then such process must be fully carried out within the specified time.

All complete or partial assignments (duly legalized), together with the Letters-Patent, must be submitted to the Minister of Commerce or Trades: such assignments are confirmed either upon the Letters-Patent themselves, or by a special certificate in case of only a partial transfer.

Aliens desiring to make application for Letters-Patent must sign a Power of Attorney and have their signature certified to by the Austrian Consul.

Government and municipal taxes are as follows: In the first five years they amount to about \$15 (in gold) every year. From the fifth to the tenth years they increase at the rate of about \$2.50 (gold) every year. After the tenth year the tax increases at the rate of about \$5 (gold) per year.

Trade Marks.—Austria registers trade marks, and unless registered they are invalid.

From 1200 to 1300 Patents are granted annually.

BELGIUM.

Letters-Patent (of Invention) are granted for twenty years, but if there are prior foreign grants the duration of the Patent (of Importation in this case) is limited to the nominal life of such prior grant. Patents of Improvement may also be obtained for minor alterations or modifications of the invention. Such Patents of Improvement are taken as forming part of the original Patent with which they expire. All grants are made without examination as to the novelty or merit of the invention, and the Patent dates as of the date of application.

The tax for the second year is about \$4 (gold), and there is a \$2 (gold) annually increasing tax upon Patents of Invention or Importation. Patents of Improvement are not liable to any annual tax.

The law does not prohibit the Patentee from importing from abroad the patented article, but requires that the invention shall be worked in Belgium within one year of its being worked in

any other country ; and working must not be discontinued for any one year while the invention is being worked abroad.

Prolongation of the time for working may often be secured.

Assignments may be made and registered. The vendor guarantees the validity of the title to the Patent, and except there is a special clause to the contrary in the assignment the purchaser can compel the vendor to refund the purchase money should the patent be proved invalid.

Agents require a Power of Attorney, but legalization of the signature thereto is not necessary.

About 2700 applications are filed annually.

Trade Marks can be registered in Belgium.

CANADA.

Patents are granted to the inventor for five, ten or fifteen years, the usual practice being to apply for a five-year Patent, and extend it. If the invention or article sought to be patented has been on sale or in public use in Canada for one year prior to application, with the knowledge or consent of the inventor, or if there are foreign Patents that have been in existence for one year prior to the application being made, the inventor is not entitled to a Patent. In the case of prior foreign grants the Canadian Patent falls at the earliest time at which any such prior grant for the same invention expires.

The applicant is required to make oath (or affirmation) that he verily believes himself to be the first and true inventor, and that the several allegations in the Petition are true.

A model of the invention is required (when capable of illustration in that manner), the longest side of which must not exceed 18 inches. In case the Invention is for a "compound," samples of the various ingredients are demanded.

Assignments of entire or partial interests may be made before or after the application has been filed.

When any Patent is deemed defective, by reason of insufficient description or specification, or by reason of the Patentee claiming too much, and it appears that this has occurred through

inadvertence, accident, or mistake, a reissue of the Patent may be obtained, in accordance with the amended specification; or when the claims are too broad, a disclaimer may be filed.

If the Patentee or his assigns have not commenced within two years and thereafter do not continuously carry on the construction or manufacture of the invention in such a manner that any person desiring to use it may obtain it or cause it to be made for him "at a reasonable price" at some manufactory or establishment in Canada, any citizen can demand a license to use the patented invention on the payment of a fair royalty. When for reasons beyond the control of the Patentee or his assigns the Patent cannot be worked within the two-year term, an extension of the time for working may be obtained, if application be made at least three months before the expiration of the said two years.

The Patent also becomes null and void if after twelve months from the date thereof the patentee or his assigns imports or knowingly permits others to import into Canada the invention or article for which Letters-Patent have been granted.

When the nature of the invention permits, the words "Patented 1880" (or whatever the year of the Patent may be) must be marked, engraved, labelled or otherwise affixed to each article, or package containing such article.

The specification, oath, petition and drawings, should be signed by the inventor. There are about 1500 Patents granted annually.

DENMARK.

There are no special Patent Laws, but those who wish to enjoy a monopoly of their inventions in this country, may obtain Royal Letters-Patent under signature of the King. The duration of said Patent is arbitrarily fixed by the Government for a term of between three and fifteen years, according to the importance of the invention.

Patents only give protection against manufacturing in Denmark, and importers are not infringers.

The invention must be worked either by manufacturing or by importation within one year from the date of the Patent, and continuously thereafter.

Agents require a Power of Attorney, the signature to which requires to be legalized by Danish Consul.

FRANCE.

Patents are granted without examination as to novelty or originality, and are subject to an annual tax of about \$20 (gold). The duration of the grant is limited to fifteen years, or to that of a prior foreign Patent. If the application be properly prepared grants are never refused, except for Pharmaceutical compositions, which remain subject to the decree of 1810, but prior publication, abroad even, kills the validity of the Patent, if ever contested in a Court of Law and such prior publication proved.

The French Law absolutely prohibits the importation from abroad, by, or with the knowledge and consent of the Patentee or his assigns, of articles for which Letters-Patent have been granted. This rule is only modified in cases where, by special permission, the Minister of Agriculture and Commerce authorizes the introduction of a single foreign manufactured article as a "model." The grant is also liable to be cancelled if the Patentee does not work his invention in France within two years from the date of grant, or ceases to work it for any two consecutive years thereafter.

Certificates of addition are granted, corresponding to the Belgian Patents of Improvement, and like them are subject to no annual tax, so long as the tax be paid on the original Patent with which they expire.

Any person marking or describing his invention as Patented (Breveté) without adding the words, "without guarantee of the Government," (*sans garantie du Gouvernement*), is liable to be fined in a sum of from 50 to 1000 francs.

Assignments may be made, but only on payment of the Patent taxes for the entire term granted, and all assignments to be valid against third parties should be registered.

As in Belgium, the vendor of a Patent guarantees its validity, and can be held liable for the return of the purchase money should the grant prove invalid.

Agents require a Power of Attorney in French, but the signature need not be certified. The applicant however should write the words "Bon pour pourvoir," above his signature.

About 7000 Patents and certificates of addition are secured annually.

Trade Marks are registered for a term of fifteen years.

GERMAN EMPIRE.

Patents for the maximum duration of fifteen years are granted for new inventions, (except for articles of food, drink or medicine,) to the first applicant, who is deemed to be the inventor.

No invention is considered "new" if it has been described in publications or been publicly worked in Germany, so as to admit of its use by persons skilled in the art to which the invention pertains.

Patents do not effect apparatus in Ships, Locomotives or Railway Carriages, whose sojourn in the country is only temporary.

Patents of Improvement are granted ; they expire with the original Patent, and are not subject to annual taxes. Applications which have received provisional protection are published once in the Reichsanzeiger, in brief, and during eight weeks after such publication, the Patent is open to opposition on the ground that it is not new, or that "the essential part of the application was taken from the descriptions, drawings, models, implements, apparatus or process adopted by another person without his consent."

There is no prohibition of importation of the Patented article as in France, but the Patent will be cancelled at the end of three years, if the Patentee omits to work his invention in Germany to an adequate extent, or to do all that is required to secure such working.

At the beginning of the second year, Patents (with the exception of Patents of addition) are subject to a tax of \$12.50 (gold);

for the third year \$25 (gold); and thereafter to a tax increasing by \$12.50 (gold) annually.

Patents will be cancelled if these taxes be not paid within at least three months of the date upon which they are due.

When an application for a patent is on firearms a model is required.

Persons not residing in Germany, must give a Power of Attorney, authorizing their agent to prosecute the application and to sign the necessary papers. The signature to this Power does not require certification.

In the two years that have elapsed since the passing of the Imperial Patent Law, about 7000 grants have been secured.

Trade Marks can be registered and protected for ten years.

GREAT BRITAIN.

Patents are granted for fourteen years from the date of application and may occasionally be prolonged in case the Invention is of great importance and the Patentee or his assigns have not received what is deemed to be sufficient remuneration.

The first person to introduce a new Invention into the United Kingdom is considered "the true and first inventor," whether he be the 'actual' inventor or not, "and except fraud can be clearly proved he can, on this point, hold the Patent against all comers."

There is no examination as to originality and but few applications are rejected, the applicant in case of attack being left to defend the novelty and originality of his invention in court of law. Application should be made prior to the publication of the Invention, even by prior foreign Patent specifications.

There are no restrictions as to importation or working of the patented article.

Disclaimers may be filed, but this is usually a costly proceeding and seldom resorted to.

It is usual on application to file merely a provisional specification setting forth the general character of the invention, but omitting its minor details, as from the result of experiment it

may be desirable to modify these to some extent during the six months granted by provisional protection. The final specification may be filed at first but this course is not desirable.

Provisional Protection having been accorded to the invention, it may be publicly worked or the article sold, but no action for infringement can be taken or registered sale of the invention made, until the Letters-Patent have been secured. We therefore come to the second or Notice to Proceed stage. This notice may be given as soon as Provisional Protection has been advertised in the "Commissioner of Patent's Journal" or it may be given at any time thereafter within four months from the date of the application. The fact that "Notice to Proceed" has been given, is advertised once and any opposition to the grant of the Patent should be entered at the Patent Office within twenty-one days from the date of the "Journal" in which such notice appears.

Opponents can get no information from the Patent Office as to the contents of the opposed's Specification, the title of the invention and the name of the applicant being their only guide.

The twenty-one days having expired and no opposition having been entered, we come to the third or Warrant and Seal stage. Application for the preparation of the Warrant and Seal must be made at least twenty-one days before the expiration of the six months covered by Provisional Protection. The Patent itself having been now secured it may be sold and assigned and action for infringement under it may be commenced, but the grant becomes invalid unless before the expiration of Provisional Protection a full, clear and exact description of the invention be filed. This is the fourth or "Final Specification" stage, the papers for which require to be most carefully drawn, as on them the "claims" are based.

Nothing that was not clearly foreshadowed in the Provisional should be claimed in the "Final," as it was upon the Invention as described in the Provisional Specification, that the Patent was granted.

Patents date as of the day of application, and within three years from such date the Patent itself must be produced and

stamped with a £50 stamp. At or before the expiration of the seventh year there is a further tax of £100 and this too must be stamped on the Patent.

A Bill now before Parliament provides for considerable reduction of the stamp duties in the earlier stages and the extension of the possible duration of a Patent to twenty-one years. The Bill not being likely to pass in its present form, the details of it are not given.

Powers of Attorney are not required by Agents, as application can be made for a Patent upon an invention "which has been communicated."

About 5000 applications are filed annually.

Useful Designs.—An article which has some peculiar shape, configuration or design which makes it useful, can be registered for a term of three years.

Trade Marks.—May be registered for a term of fourteen years by aliens or residents.

Ornamental Designs.—The term of registration varies with the class of goods.

GREECE.

Patents are only granted by special Acts of the Chamber.

HOLLAND.

Patents are not granted.

ITALY.

A new invention, or discovery, although patented abroad, and published pursuant to the provisions of Foreign legislation, confers on its author, or his assigns, the right of obtaining a Patent in Italy, provided application be made before the expiration of the prior foreign Patent, and before other parties have freely imported and worked the invention in the kingdom.

Medicines are not patentable.

The duration of a Patent is limited to fifteen years, or the longest term (not exceeding fifteen years) granted under prior foreign applications.

Certificates of addition are granted as in France and Belgium.

The Patent dates as of the last day of March, June, September or December, whichever next follows the date of application.

During the first six months of the life of the Patent, disclaimers may be filed, the parts so disclaimed being deemed as having never been comprehended in the Patent.

Taxes.—The annual tax for the second and third years amounts to about \$11 (gold); from the fourth to sixth years about \$15 (gold); from the seventh to ninth years about \$20 (gold); from the thirteenth to fifteenth \$30 (gold). There is also an additional tax of small amount, for each extension of term asked for.

The usual practice is to secure grants for three or six years. At the expiration of said terms, application may be made for a Certificate of Prolongation.

A Patent ceases to be valid if the annual tax be not paid within three months of its becoming due.

Patents granted for a term of five years or less, must be worked each year of the grant.

Patents of a longer duration than five years, must be worked at least once in every two years.

Prolongations for working may occasionally be obtained.

Assignments are invalid as regards third parties, unless registered at the Ministry, and partial assignments can only be registered on payment of the taxes due for the remainder of the term of the Patent.

Agents require a Power of Attorney, (the ordinary French Power will do) and the signature requires to be certified by the Italian Consul.

From 600 to 700 Patents are annually secured.

NEW SOUTH WALES.

Letters of Registration, granting the same privileges and rights as ordinary Letters-Patent, may be obtained for a period of not less than seven or more than fourteen years by the author or designer of an Invention, his agents or assigns.

There is no prohibition as to importation from abroad of the patented article and working is not compulsory.

Assignments may be made and should be registered. There are no annual or other taxes after the Patent is once secured.

NEW ZEALAND.

Letters-Patent are not granted to aliens who may have secured prior grants in other countries : however, upon production of a certified copy of a prior foreign Patent and statutory declarations that such prior Patent is still in force, and that the applicant is the bona fide holder of it, Letters of Registration may be obtained (granting the same rights as Letters-Patent) for the unexpired term of the prior foreign Patent.

NORWAY.

Patents are granted for a term not exceeding ten years, but expire with prior foreign Patent ; they are subject to no annual taxes, the only stipulation being that they shall be put into practical use in Norway within (usually) two years from their date.

A legalized power is required.

PORTUGAL.

Patents are granted for a term not exceeding fifteen years. If there be prior foreign Patents the grant is limited, and expires with the first of such prior grants. Persons who are not the inventors may obtain Patents of Importation, the duration of which is limited to five years. This entitles them to the sole right of manufacturing in Portugal, "but does not establish the

“exclusive right of importing machines, utensils, instruments
“and other articles to which they relate.”

Patents must be worked within the first half of their duration, and the invention must thereafter be publicly worked at least twice a month, whilst in cases of Chemical Processes, \$1000 “caution money” must be deposited, and the process worked three times during the term of the Patent before the public.

The Patentee who does not fulfil these conditions is liable to a heavy fine, imprisonment, and to the confiscation of the apparatus, or of the caution money.

A certified power in Portugese is required.

QUEENSLAND.

The Law is similar to that of New South Wales, with the addition however, that provisional protection for six, with an extension to twelve months, may be obtained.

RUSSIA.

Patents of two kinds are granted. First, Patents of Invention; and second, Patents of Importation.

Valid Patents of Invention may be obtained by the inventor or his legal assignee. Nevertheless, a mere importer may obtain a Patent of Invention, and his right to such grant can only be contested by the actual inventor.

The duration of Patents of Invention are fixed at three, five and ten years. After issue of the Patent (and only occasionally before,) the term originally applied for cannot be extended.

Protection in case of infringement dates as of day of application, while the duration of the Patent dates from the day of grant. As it takes twelve to eighteen months to put a Russian Patent through, this virtually prolongs the life of a Patent.

There is no prohibition as to importation by the inventor of foreign made articles, but the Law requires that the invention should be worked once at least, during the first quarter of the duration of the grant.

There is strict examination as to novelty and originality, and application should be made before publication of the specification in other countries, as applications are liable to rejection for want of novelty, originality or utility.

Patents of Importation are granted for from one to six years. During the currency of foreign Patents, they have the same force as Patents of Invention, but are much more expensive in proportion to their duration.

No Power of Attorney is required.

SOUTH AUSTRALIA.

By the Patent Act of 1877 the first or true inventor, or his assignee, may obtain Letters-Patent for fourteen years (with a possible further extension of seven years) for any new and useful Invention not publicly used or offered for sale within the province. In case of prior foreign grants the duration is limited to the earliest date at which the Patent in any such foreign country shall expire.

Provisional Protection is granted for six months, during which time amendment and alterations may be made in the Specification.

The filed Specification is open to inspection, and opposition to the grant may be entered during from one to three months, as the Commissioner may determine.

"Reissues" may be obtained, as in the United States, and Disclaimers and Caveats may be filed.

Patents are subject to a tax of £5 at the end of third and seventh years respectively.

SPAIN.

Patents give protection not only in the Peninsula and adjacent islands, but also in the ultramarine provinces (Cuba, Porto Rico and the Philippines). Inventions first patented in Spain have a duration of twenty years. If patented first in some foreign country, application should be made within two

years from the date of such prior Patent, even then the grant may be limited to ten years on the petition of any interested party.

Patents of Importation are granted to any person, who, without being the inventor, introduces a new industry in Spain.

As in France, Belgium and Germany, Certificates of Addition may be obtained.

There is no restriction as to importation, but the Patent must be worked in Spain within two years from the date of grant and certified, and working must not thereafter be continuously interrupted for one year and a day.

Tax on second year is 20 francs, and there is a small annually increasing tax of 10 francs. Infringers are liable to fine or imprisonment.

A certified Power of Attorney in Spanish is required. If in any other language there is the expense of official translation at Madrid.

In 1877 only 142 grants were made, but since the New Law (30th July, 1878) has been promulgated, the number of applications has rapidly increased.

SWEDEN.

The duration of a grant is never in excess of fifteen years, the term being arbitrarily fixed by the Board of Trade, from whose decision there is no appeal.

The inventor alone can obtain a Patent.

There is no restriction as to importation, but the Invention must be fully worked and operation certified in Sweden, within from one to four years from the date of grant, as the Board of Trade may decide, (the term usually being fixed at two years) and annually thereafter.

A legalized Power of Attorney in Swedish is required.

SWITZERLAND.

There is no general Patent Law at the present time.

TASMANIA.

Patents are granted for fourteen years, with a possible extension of not over fourteen years additional "to the true and first Inventor" for new Inventions.

Provisional Protection is granted for the first six months, and during this time the law officer may allow or require the specification to be amended.

Notice to Proceed and Warrant and Seal follow the receipt of Provisional Protection, the law following to a great extent that of Great Britain, upon which it is based.

No prohibition as to importation.

Tax of £15 at or before the expiration of the third year, and of £20 at or before the expiration of the seventh year.

TURKEY.

Patents are only allowed by special acts.

VICTORIA.

The Law is the same as that of Tasmania. About 100 applications are granted annually.

BRAZIL.

The term of grant of a Patent is fixed by the Government, and varies from five to twenty years.

A Patent must be worked within two years from delivery.

If the invention is proved to be old, the Patent is void.



COPYRIGHTS.

Any citizen or resident of the United States may obtain a copyright for a book, map, chart, dramatic or musical composition, engraving, cut, print, photograph, or the description of the painting, drawing, chromo, statue, statuary, or model or design for a work of the fine arts.

A printed copy of the title, etc. must be filed before the publication of the book or other article.

Within ten days after the publication of each book or other article, two complete copies of the best edition issued must be filed in the Office of the Librarian of Congress, at Washington.

Any author may reserve the right to translate or to dramatize his own work. In this case notice should be given by printing the words "right of translation reserved," or "all rights reserved" below the notice of copyright entry, and notifying the Librarian of Congress of such reservation, to be entered upon the record.

Each copyright secures the exclusive right of publishing the book or article copyrighted for the term of twenty-eight years. Six months before the end of that time, the author or designer, or his widow or children, may secure a renewal for the further term of fourteen years, making forty-two in all.

The time within which any work copyrighted may be issued from the press is not limited by any law or regulation. A copyright may be secured for a projected work as well as for a completed one.

Any copyright is assignable in law by any instrument of writing, but such assignment must be recorded in the Office of the Librarian of Congress within sixty days from its date.

A copy of the record of any copyright entry can always be had under seal.

In case of books published in more than one volume, or other articles in variation, a copyright must be taken out for each.

To secure a copyright for a painting, statue, etc., so as to prevent infringement by copying, engraving or vending such design, a definite description must accompany the application, and a photograph (cabinet size) of same must be filed within ten days from the completion of the work.

Every applicant must state distinctly the name and residence of the claimant, and whether the right is claimed as author, designer, or proprietor.



OUR FACILITIES

AT OUR MAIN OFFICES,

901 WALNUT STREET, PHILA., PA.

For carrying on a large and perfect business in

AMERICAN AND FOREIGN PATENTS.

To carry on a large and successful Patent business, it is absolutely necessary that, in addition to a thorough knowledge of the arts and sciences, as set forth in the first part of this book, the attorney must have an establishment capable of affording him all the facilities whereby he can have the business quickly, beautifully, perfectly and thoroughly done. We have at considerable expense made this establishment very complete, as hereafter shown, and are adding to it continually. It often happens that a case brought to the Offices in the morning must be sent to the Patent Office before the afternoon is over, and it is only by having these facilities that we can do this easily and without slighting the application.

In addition to attending to business here, when a case requires our especial attention in Washington, and when our agent there cannot attend to it, we go without delay.

In connection with our business here, consultations can be had with K. B. HUNTER in Cincinnati, R. J. O. HUNTER and F. W. HUNTER in Kansas City, and E. W. HUNTER in Chicago.

THE BUSINESS OFFICE

is that in which Mr. R. M. HUNTER, M. E., C. E. can be consulted in relation to Patents, Engineering and Experting during his office hours, which are from 9 A. M. to 12 noon in the morning, and from 2 P. M. to 4 P. M. in the afternoon. In this Office the specifications are drawn up in rough, calculations made, machinery designed, and all letters and correspondence attended to. An Assistant will always be found on hand and in waiting when Mr. HUNTER is absent, who will answer any questions relating to pending applications or others relating to the business.

THE ENGROSSING DEPARTMENT

is large and complete. There are several clerks always on hand who engross all specifications, assignments or other papers which have been prepared in rough in Mr. HUNTER's Office. In this room are all duplicates of documents made, and correspondence, "letter-press" copied and filed.

THE RECORD DEPARTMENT

is very complete. In the files there, are kept in perfect record, all the cases before the Patent Office and all papers relating to Foreign applications. Each copy of application for a Patent is enclosed within a case, in company with a set of heliographic duplicates of the original drawings, with all the official letters received from the United States or Foreign Patent Offices, and upon the face of the case is recorded the name of the inventor, his place of residence, his invention, the serial number of his case, the date of filing, all the dates of rejection and amendment in their proper order, and when the case is allowed, the date of allowance, and upon issue of the patent, the date of receipt, its number and date of issue ; all communications from the Patent Office are recorded in *red ink*, and those sent from our Offices in *black*, to distinguish. By this system it is easily seen at a glance how the case stands and the dates of action. Here we also keep copies of all patents taken out by us.

DRAUGHTING DEPARTMENT.

In our DRAUGHTING DEPARTMENT we have conveniences for making drawings from one square inch to a thousand square feet. It is here that the finest drawings sent to the Patent Office are prepared. It is here that machinery is designed and working drawings made. When an inventor has obtained his patent, he can have large working drawings made from which to build his machine. We have drawing-tables constructed after our own especial design, whereby we are enabled to prepare drawings at short notice, owing to the facilities obtained by the peculiar movements to the table. We make a Specialty of large Perspective Drawings of Machines, etc., and for finely executed drawings, **WE ARE OPEN TO COMPETITION WITH THE WORLD.**

TESTIMONY DEPARTMENT.

Our Office in which we take TESTIMONY, (and which is taken either in case of an interference in the Patent Office between two applications, or between a patent and an application, an application for an extension, or in case of infringements of patents or other legal cause, etc.) is large and spacious, and is well supplied with cases in which the testimony is kept and recorded.

PHOTOGRAPHIC DEPARTMENT.

Our instrument is the finest that can be made. This department is under the supervision of a thorough chemist and photographer. Where *speed* is required in complicated drawings, it is advisable to make an albumen unfixed print of the intricate machine from which to trace our perspective.

In experting, it often becomes convenient and necessary to make prints of various articles and machines, and use them in giving testimony. By a convenient change of the lenses, and use of a large and powerful microscope, we produce enlarged views of very minute objects, arising in legal issues.

Again, it is very desirable in making applications for designs where several duplicate prints are required, and in many other ways it becomes very useful.

MODEL VAULT.

In our Fire-proof MODEL VAULT, we file the models which require the strictest secrecy. In this Vault we have ample room to file away many hundreds of models, and under its shelter are continually stowed away from the sight of man, many valuable, beautiful and intricate models belonging to our clients.

WORKING DEPARTMENT.

This is a large, spacious and well-lighted room for the erection and operation of FULL SIZED MACHINES. At present there is erected a full sized Harvesting and Grain-binding Machine, which is all in complete working order. It is needless for us to remark how needful this is in many cases of complicated mechanism, and particularly where the inventor of the machine is in interference with that of another, and testimony is required. We find this department very useful, and fully appreciated by our clients who have the free use of it to better their interests with us.

HELIOGRAPHIC DEPARTMENT.

In our HELIOGRAPHIC DEPARTMENT, through the aid of chemistry and the actinic rays of the sun, etc., we are enabled to reproduce and print many copies from the original drawings, for record and subsequent use in amending, arguing, appealing or interference. It is a department which aids us very materially in prosecuting a case before the Patent Office, and one which we would not do without at any price.

We furnish heliographic prints of the application drawings to inventors at a small cost, when desired.

GELATINOUS PRINTING DEPARTMENT.

In this department our GELATINOUS PRINTING is performed. The compounds used are manufactured for us, and are especially prepared for particular uses.

With the old method of writing in copying ink and then taking a press copy, the number of copies of a specification were very limited. By our Gelatinous printing we are enabled very quickly to produce 20 to 30 copies, exact fac-similes of the original writing, all on legal cap, and in ink, as if each copy had been the original. It is also very useful in producing a quantity of rough drawings, assignments, agreements, or other legal documents at short notice. We would not be without this useful department.

OFFICIAL PRINTED BLANK FILES.

In these FILES are kept all the necessary printed blanks for carrying on a Patent business from our own Offices, through the Patent Office and Courts. Here also are filed the various assignments used before, during, and after the issue of the patent. Here we have filed on the various shelves, thousands of copies of dozens of different blanks. To carry on a business with facility and no loss of time, we find it is very advisable to have printed blanks, which we fill up as the case requires, to form a petition, oath, agreement, argument, appeal, application, notice, etc., as the business demands.

LIBRARY.

In connection with these Offices we have a very complete set of Patent Office Reports and Patent Office Official Gazettes, containing every patent which has been issued in the United States. Our LIBRARY also includes many standard works on Patent Law. In addition to these we have a library of Standard Engineering and Scientific Works and Digests, which are always of great value in examining into the state of the art.

Having made a specialty of Harvesting and Binding Machines, we have complete files of copies of all patents which are issued relating to harvesting and binding machinery, or any agricultural implements.

COPIES OF PATENTS.

Whenever an application was rejected, we have invariably ordered copies of the patents of the references cited, consequently we have been continually adding to these copies until we have very complete records of the Patents issued. Every day makes this department more and more complete. Its advantage is readily seen by an observing inventor, who perceives at once that if a reference is given to a claim in his application, that instead of examining the Office Reports, which only gives the claim and one view of the drawings, we examine the fac-simile copy of the original patent, with full specifications, claims and drawings whereby we can more readily see the value of the reference, and its pertinency to our claim. An inventor cannot over-estimate the value of this department.

SHORT HAND.

We have engaged, in connection with our Offices, a Stenographer or short hand writer, the value of whose services, it is needless for us to remark. Where speed is required, the employment of short hand is of the utmost value.



DRAUGHTING
PLANS,
SECTIONS,
ELEVATIONS
AND
PERSPECTIVE DRAWINGS

MACHINERY.

BOILERS,
ENGINES,
MILLS,
ETC., ETC.

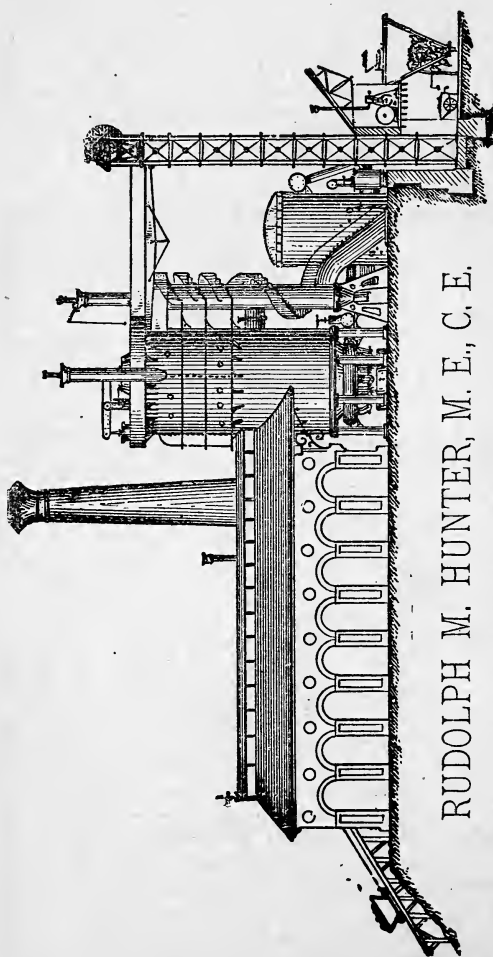
BY

RUDOLPH M. HUNTER,
M. E., C. E.

901 WALNUT STREET,
PHILADELPHIA, PA.

DESIGNED

IRON STEEL



RUDOLPH M. HUNTER, M. E., C. E.

BLAST FURNACES, ROLLING MILL
MACHINERY, ETC.

DESIGNED, AND WORKING DRAWINGS PREPARED.

MAIN OFFICES—901 WALNUT ST., PHILADELPHIA, PA.

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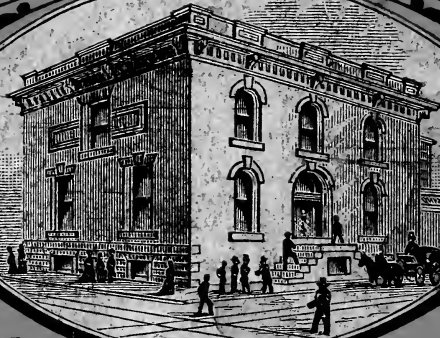




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ILLUSTR

PATENT OFFICES



OF

RUDOLPH M. HUNTER
CONSULTING ENGINEER

MECHANICAL EXPERT
AND
SOLICITOR OF AMERICAN & FOREIGN PATENTS

MAIN OFFICE

901 WALNUT ST. PHILADELPHIA